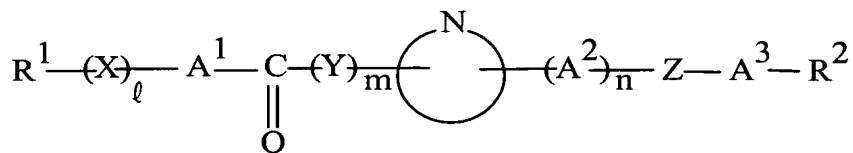


AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A compound of the formula:



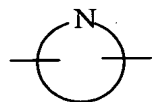
wherein R^1 is a substituted or unsubstituted N-containing cycloalkyl,

R^2 is carboxy or protected carboxy,

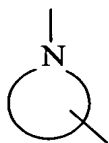
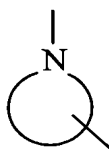
A^1 is a substituted or unsubstituted lower alkylene, a substituted or unsubstituted lower alkanyl-ylidene or a substituted or unsubstituted lower alkenylene,

A^2 is lower alkylene,

A^3 is a substituted or unsubstituted lower alkylene,



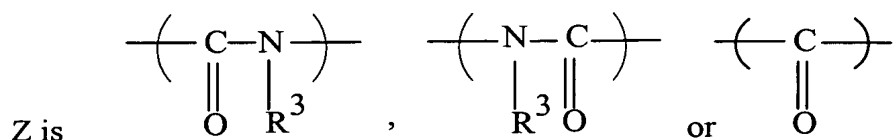
is a group of the formula:



wherein is a substituted or unsubstituted N-containing heterocyclic group,

X is O, S or NH,

Y is NH,



wherein

R³ is hydrogen or lower alkyl,

ℓ, m and n are each the same or a different integer of 0 or 1,

and or a pharmaceutically acceptable salt thereof.

2. (Currently Amended) The compound of claim 1, wherein

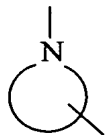
R¹ is a substituted or unsubstituted 3 to 8 membered cycloalkyl containing 1 to 3 nitrogen atom(s),

R² is a carboxy or an esterified carboxy,

A¹ is a substituted or unsubstituted lower alkylene, a substituted or unsubstituted lower alkanyl-ylidene or a substituted or unsubstituted lower alkenylene,

A² is lower alkylene,

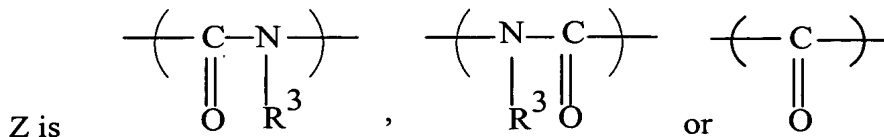
A³ is a substituted or unsubstituted lower alkylene,



is a substituted or unsubstituted saturated 3 to 8 membered heteromonocyclic group containing 1 to 4 nitrogen atom(s), a substituted or unsubstituted unsaturated condensed heterocyclic group containing 1 to 4 nitrogen atom(s), or a substituted or unsubstituted saturated 3 to 8-membered heteromonocyclic group containing 1 to 5 carbon atom(s), 1 to 2 oxygen atom(s) and 1 to 3 nitrogen atom(s),

X is O, S, or NH,

Y is NH, and



wherein

R³ is hydrogen or lower alkyl;

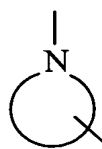
ℓ is an integer of 0 or 1,

m is an integer of 0 or 1, and

n is an integer of 0 or 1.

3. (Currently Amended) The compound of claim 2, wherein

R¹ is an unsubstituted piperidyl or a substituted piperidyl containing 1 or 2 oxo or [5-(lower) alkyl-2-oxo-1,3-dioxol-4-yl](lower)alkyl,



is piperidyl, morpholinyl, tetrahydroquinolyl or pyrrolidinyl,

A³ is an unsubstituted lower alkylene or a substituted lower alkylene containing 1 to 3 suitable substituent(s) selected from the group consisting of (C₁-C₆)alkyl; (C₂-C₆)alkenyl; (C₂-C₆)alkynyl; phenyl; phenyl(C₁-C₆)alkyl; phenyl(C₁-C₆)alkyl having 1 to 4 (C₁-C₆)alkoxy, halo (C₁-C₆) alkyl or (C₁-C₆)alkylene dioxy; (C₁-C₆)alkyl having unsaturated condensed heterocyclic group containing 1 to 4 nitrogen atom(s); cyano; amino; protected amino; and phenyl(C₁-C₆)alkylcarbonyl;

R², R³, A¹, A², X, Y or Z are each as defined in claim 2,

ℓ is an integer of 0,

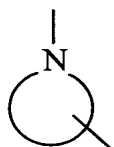
m is an integer of 0, and

n is an integer of 0.

4. (Currently Amended) The compound of claim 3,

wherein

R^1 is an unsubstituted piperidyl or a substituted piperidyl containing 1 or 2 oxo or [5-(lower)alkyl-2-oxo-1,3-dioxol-4-yl](lower)alkyl,



is piperidyl, morpholinyl, tetrahydroquinolyl or pyrrolidinyl,

A^3 is an unsubstituted lower alkylene or a substituted lower alkylene containing 1 to 3 suitable substituent(s) selected from the group consisting of (C₁-C₆)alkyl; (C₂-C₆)alkenyl; (C₂-C₆)alkynyl; phenyl; phenyl(C₁-C₆)alkyl; phenyl(C₁-C₆)alkyl having 1 to 4 (C₁-C₆)alkoxy, halo(C₁-C₆)alkyl or (C₁-C₆)alkylene dioxy; (C₁-C₆)alkyl having unsaturated condensed heterocyclic group containing 1 to 4 nitrogen atom(s); cyano; amino; (C₁-C₆)alkanoylamino; aroylamino which may have 1 to 3 hydroxy, (C₁-C₆)alkoxy, halogen or phenyl; cyclo(C₃-C₆)alkylcarbonylamino; (C₁-C₆)alkoxy(C₁-C₆)alkylcarbonylamino; (C₂-C₆)carbonylamino; (C₁-C₆)alkylsulfonylamino; phenylsulfonylamino; and phenyl(C₁-C₆)alkylcarbamoyl;

R^2 , R^3 , A^1 , A^2 , X, Y or Z are each as defined in claim 3,

ℓ is an integer of 0,

m is an integer of 0, and

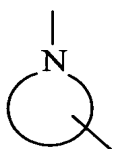
n is an integer of 0.

5. (Currently Amended) The compound of claim 4, wherein

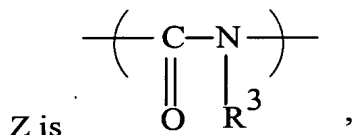
R¹ is piperidyl,

A¹ is a lower alkylene or a lower alkanyl-ylidene,

A³ is an unsubstituted lower alkylene or a substituted lower alkylene containing a lower alkyl, a lower alkynyl or a lower alkanoylamino,



is piperidyl,



and

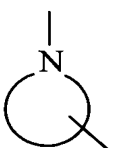
R², R³, A², Y, ℓ, m, and n are each as defined in claim 4.

6. (Currently Amended) The compound of claim 5, wherein

R³ is hydrogen,

A¹ is a lower alkylene,

A³ is a lower alkylene having a lower alkanoylamino, and

R¹, A², , X, Y and Z are each as defined in claim 5.

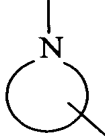
7. (Original) N-[(R)-1-{3-(4-piperidyl)propionyl}-3-piperidylcarbonyl]-2(S)-acetyl-amino- β -alanine or its hydrochloride.

8. (Currently Amended) The compound of claim 5, wherein

R³ is hydrogen,

A¹ is a lower alkylene,

A³ is a lower alkylene having a lower alkynyl, and

R¹, R², A², , X, Y, Z, *l*, m and n are each as defined in claim 5.

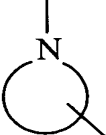
9. (Original) N-[(R)-1-{3-(4-piperidyl)propionyl}-3-piperidylcarbonyl]-3(S)-ethynyl- β -alanine.

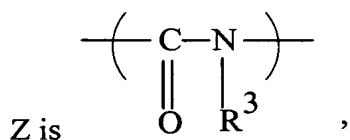
10. (Currently Amended) The compound of claim 4, wherein

R¹ is piperidyl,

A¹ is a lower alkylene or a lower alkanylylidene,

A³ is an unsubstituted lower alkylene or a substituted lower alkylene containing a lower alkyl, a lower alkynyl or a lower alkanoylamino,

 is morpholinyl,



and

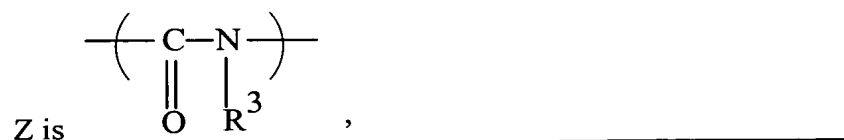
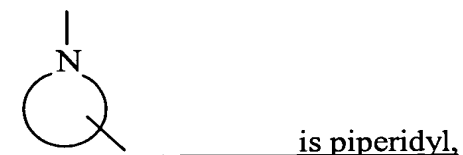
R^2 , R^3 , A^2 , Y, ℓ , m and n are each as defined in claim 4.

11. (Currently Amended): A compound of claim 10 5, wherein

R^1 is piperidyl,

A^1 is a lower alkylene,

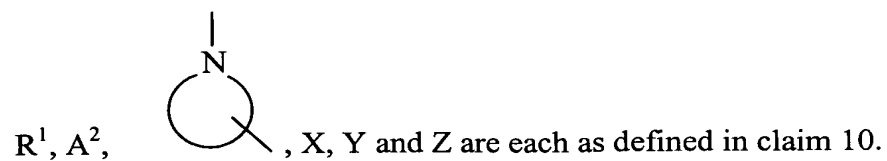
A^3 is a lower alkylene,



R^3 is hydrogen,

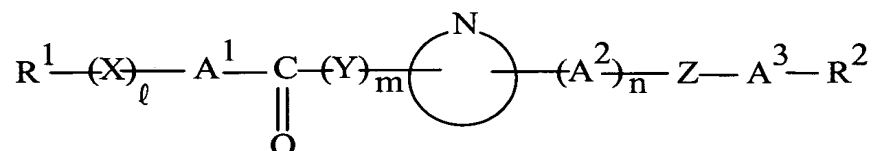
~~A^1 is lower alkylene,~~

~~A^3 is lower alkylene,~~ and



12. (Original) N-[4-{3-(4-piperidyl)propionyl)-2-morpholinylcarbonyl}-β-alanine or its hydrochloride.

13. (Currently Amended) A process for preparing a compound of the formula:



wherein

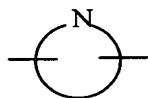
R^1 is a substituted or unsubstituted N-containing cycloalkyl,

R^2 is a carboxy or a protected carboxy,

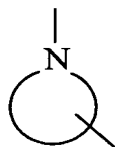
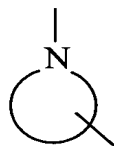
A^1 is a substituted or unsubstituted lower alkylene, a substituted or unsubstituted lower alkanyl-ylidene or a substituted or unsubstituted lower alkenylene,

A^2 is a lower alkylene,

A^3 is a substituted or unsubstituted lower alkylene,



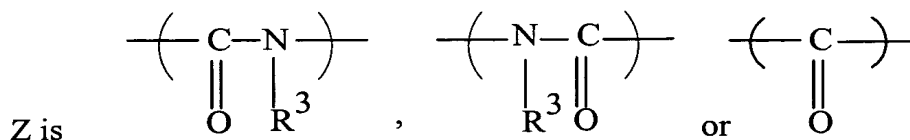
is a group of the formula:



wherein is a substituted or unsubstituted N-containing heterocyclic group,

X is O, S or NH,

Y is NH,

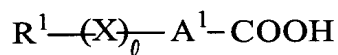


(wherein R^3 is hydrogen or lower alkyl), and

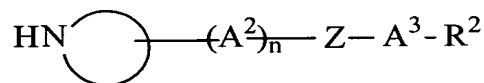
ℓ , m and n are each the same or a different integer of 0 or 1,

or a salt thereof, which comprises:

(i) reacting a compound of the formula

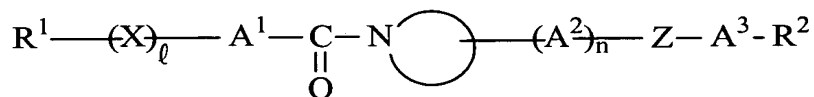


wherein R^1 , A^1 , X and ℓ are each as defined above, or its reactive derivative at the carboxy group or a salt thereof, with a compound of the formula:



wherein R^2 , A^2 , A^3 , $\text{HN}\bigcirc$, Z and n are each as defined above,

or its reactive derivative at the amino group or a salt thereof, to give a compound of the formula:



wherein $R^1, R^2, A^1, A^2, A^3,$

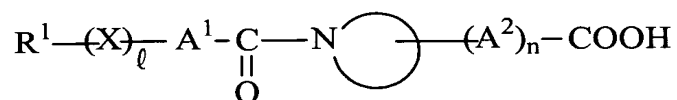


, X , Z , ℓ and n are each as defined

above,

or a salt thereof, or

(ii) reacting a compound of the formula:



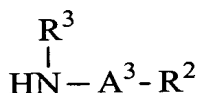
wherein R^1 , A^1 , A^2 ,



, X , ℓ and n are each as defined above,

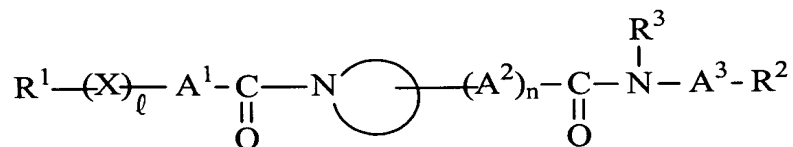
or its reactive derivative at the carboxy group


or a salt thereof, with a compound of the formula:



wherein R², R³ and A³ are each as defined above, or its reactive derivative at the amino group

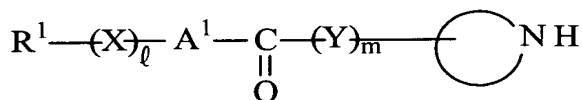
or a salt thereof, to give a compound of the formula:




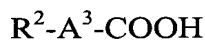
wherein $R^1, R^2, R^3, A^1, A^2, A^3,$ , X, ℓ and n are each as defined above,

or a salt thereof, or

(iii) reacting a compound of the formula:

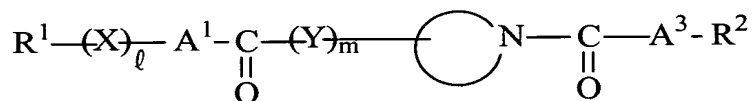



wherein $R^1, A^1,$ , X, Y, ℓ and m are each as defined above, or its reactive derivative at the amino group or a salt thereof, with a compound of the formula



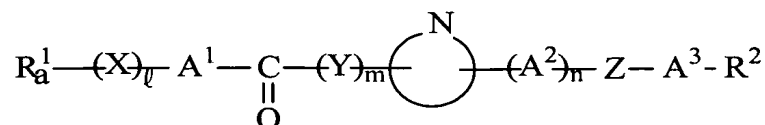
wherein R^2 and A^3 are each as defined above,

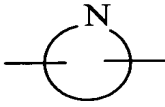
or its reactive derivative at the carboxy group or a salt thereof, to give a compound of the formula:

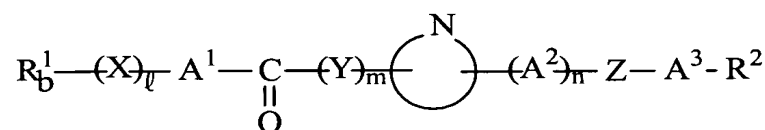


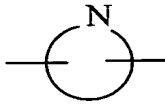
wherein $R^1, R^2, A^1, A^3,$ , X, Y, Q and m are each as defined above, or a salt thereof, or

(iv) subjecting a compound of the formula:

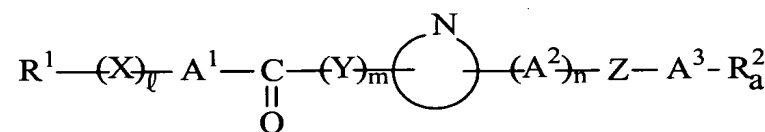


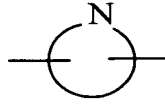
wherein R^2 , A^1 , A^2 , A^3 , , X , Y , Z , ℓ , m and n are each as defined above, and R_a^1 is a substituted or unsubstituted N-containing cycloalkyl having amino protective group, or a salt thereof, to elimination reaction of the amino protective group, to give a compound of the formula:

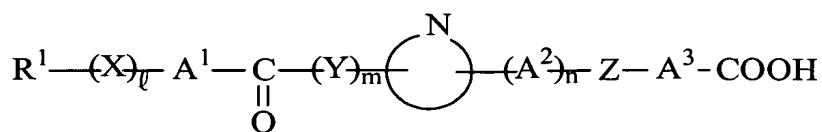


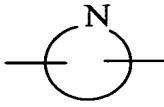
wherein R^2 , A^1 , A^2 , A^3 , , X , Y , Z , ℓ , m and n are each as defined above, and R_b^1 is a substituted or unsubstituted N-containing cycloalkyl, or a salt thereof, or

(v) subjecting a compound of the formula:

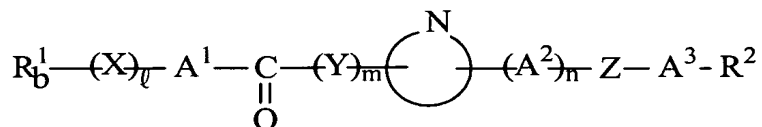


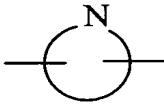
wherein R^1 , A^1 , A^2 , A^3 , , X , Y , Z , ℓ , m and n are each as defined above, and R_a^2 is protected carboxy, or a salt thereof, to elimination reaction of carboxy protective group, to give a compound of the formula:

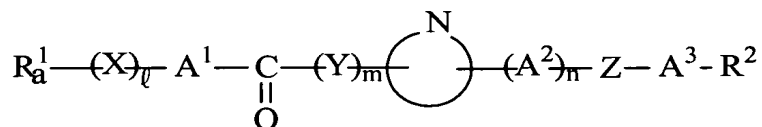


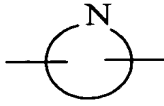
wherein R^1 , A^1 , A^2 , A^3 , , X , Y , Z , ℓ , m and n are each as defined above, or a salt thereof, or

(vi) subjecting a compound of the formula:

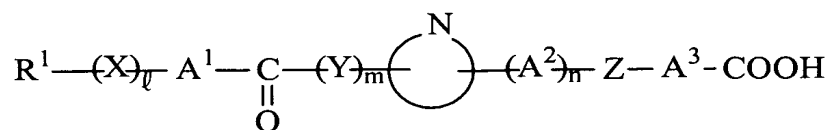


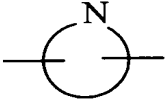
wherein R^2 , A^1 , A^2 , A^3 , , X , Y , Z , ℓ , m and n are each as defined above, and R_b^1 is a substituted or unsubstituted N-containing cycloalkyl, or a salt thereof, to protecting reaction of amino, to give a compound of the formula:

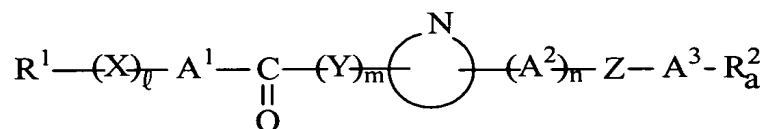


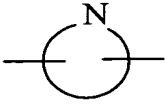
wherein R^2 , A^1 , A^2 , A^3 , , X , Y , Z , ℓ , m and n are each as defined above, and R_a^1 is a substituted or unsubstituted N-containing cycloalkyl having amino protecting group, or a salt thereof, or

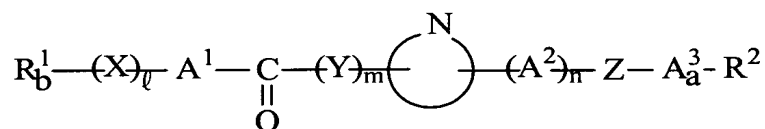
(vii) subjecting a compound of the formula:

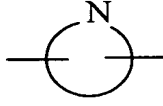


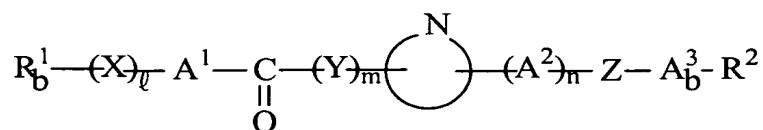
wherein R^1 , A^1 , A^2 , A^3 , , X , Y , Z , ℓ , m and n are each as defined above, or its reactive derivative at the carboxy group or a salt thereof, to protecting reaction of the carboxy, to give a compound of the formula:

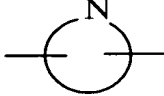


wherein R^1 , A^1 , A^2 , A^3 , , X , Y , Z , ℓ , m and n are each as defined above, and R_a^2 is a protected carboxy, or a salt thereof, or
 (viii) subjecting a compound of the formula:

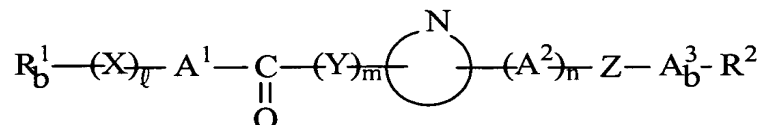


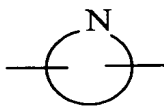
wherein R_b^1 , R^2 , A^1 , A^2 , , X , Y , Z , ℓ , m and n are each as defined above, and A_a^3 is lower alkylene having protected amino or a salt thereof, to elimination reaction of amino protective group, to give a compound of the formula:

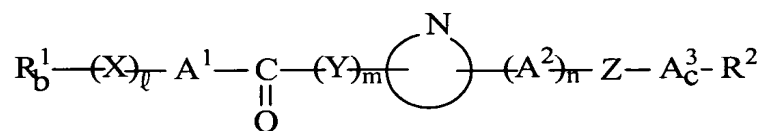


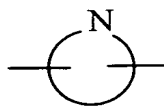
wherein R^1_b , R^2 , A^1 , A^2 , , X , Y , Z , ℓ , m and n are each as defined above, and A^3_b is a lower alkylene having an amino or a salt thereof, or

(ix) subjecting a compound of the formula:



wherein R^1_b , R^2 , A^1 , A^2 , , X , Y , Z , ℓ , m and n are each as defined above, and A^3_b is lower alkylene having amino, or a salt thereof, to acylation reaction of amino, to give a compound of formula:



wherein R^1_b , R^2 , A^1 , A^2 , , X , Y , Z , ℓ , m and n are each as defined above, and A^3_c is lower alkylene having acylamino, or a salt thereof.

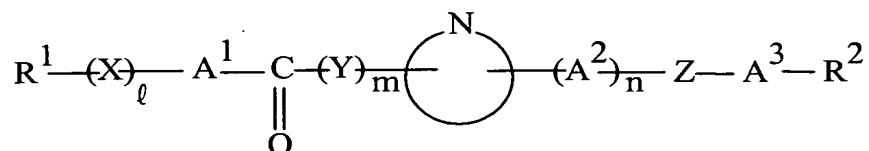
14. (Currently Amended) A pharmaceutical composition which comprises, as an active ingredient, at least one compound of claim 1 or a pharmaceutically acceptable salt thereof in admixture with a pharmaceutically acceptable carriers or excipients.

15. (Canceled).

16. (Currently Amended) ~~The A composition comprising the~~ compound of claim 1, or a pharmaceutically acceptable salt thereof, ~~wherein said compound or pharmaceutically acceptable salt thereof is admixed with~~ and a pharmaceutically suitable carrier.

17. (Previously Presented) A method for the treatment of diseases caused by thrombus formation; restenosis or reocclusion; the thrombus formation in case of vascular surgery, valve replacement, extracorporeal circulation or transplantation; disseminated intravascular coagulation; thrombotic thrombocytopenic; essential thrombocytosis; inflammation; or for the adjuvant therapy with thrombolytic drug or anticoagulant; which comprises administering a compound of claim 1 or a pharmaceutically acceptable salt thereof to a human being or an animal.

18. (Previously Presented) A compound of the formula:



wherein:

R^1 is a 6-membered cyclo(lower)alkyl containing 1 to 3 nitrogen atoms which may have one or more amino protective groups;

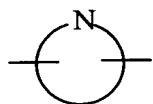
X is O, S or NH, and

ℓ is an integer of either 0 or 1;

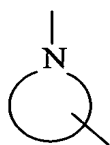
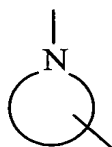
A^1 is a substituted or unsubstituted lower alkylene, a substituted or unsubstituted lower alkenylene or a substituted or unsubstituted lower alkanyl-ylidene;

Y is NH, and

m is an integer of either 0 or 1;

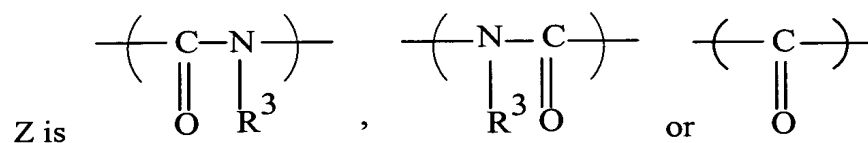


is a group of the formula:



wherein is a substituted or unsubstituted 5 or 6-membered N-containing heterocyclic group containing 1 to 3 nitrogen atoms;

A² is a lower alkylene, and n is an integer of either 0 or 1;



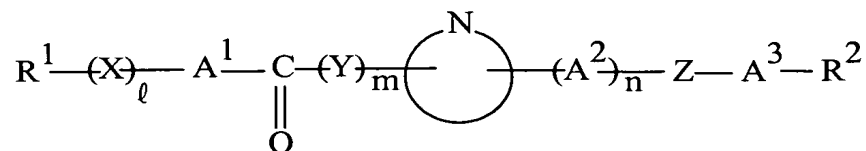
wherein R³ is hydrogen or a lower alkyl;

A³ is a substituted or unsubstituted lower alkylene;

and R² is a carboxy or a protected carboxy;

or a pharmaceutically acceptable salt thereof.

19. (Previously Presented): A compound comprising the following structure:



wherein

R^1 is piperidyl, or piperidyl with one acyl;

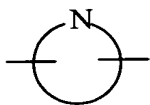
X is O, S or NH, and

ℓ is an integer of 0;

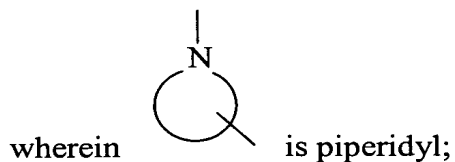
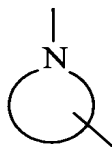
A^1 is ethylene;

Y is NH, and

m is an integer of 0;

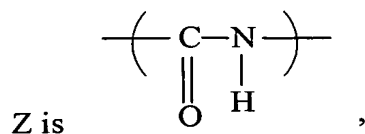


is a group of the formula:



A^2 is a lower alkylene, and

n is an integer of 0;



wherein R^3 is hydrogen or a lower alkyl;

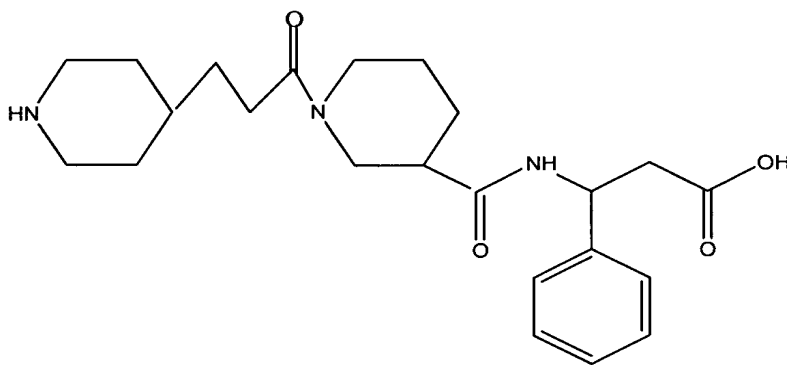
A^3 is ethylene, trimethylene or tetramethylene, each of which has one substituent selected from the group consisting of aryl, aryl(lower)alkyl and a heterocyclic group; and

and

R^2 is a carboxy or a protected carboxy;
or a pharmaceutically acceptable salt thereof.

20. (Previously Presented): The compound of Claim 19, wherein
 R^1 is 4-piperidyl; and
 A^3 is ethylene, trimethylene or tetramethylene, each of which has one substituent
selected from the group consisting of phenyl, pyridyl, and quinolyl.

21. (Currently Amended) The compound of Claim 20, which is N-[(R)-1-{3-(4-piperidyl)propionyl}-3-piperidyl-carbonyl]-3-phenyl-L-alanine or its acid addition salt or a compound of the formula:



or its acid addition salt.

22. (Currently Amended) A method of producing a medicament, comprising mixing
the compound of claim 1 or a pharmaceutically acceptable salt thereof with at least one
pharmaceutically suitable carrier or excipient.

23-24. (Cancelled)

25. (Previously Presented) The compound of claim 16, wherein said compound is N-[(R)-1-{3-(4-piperidyl)propionyl}-3-piperidylcarbonyl]- β -alanine hydrochloride.

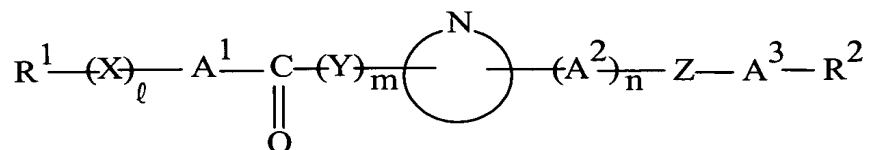
26. (Previously Presented) The method of claim 17, wherein said compound is N-[(R)-1-{3-(4-piperidyl)propionyl}-3-piperidylcarbonyl]- β -alanine hydrochloride.

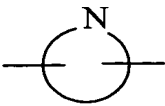
27. (Previously Presented) The method of claim 22, wherein said compound is N-[(R)-1-{3-(4-piperidyl)propionyl}-3-piperidylcarbonyl]- β -alanine hydrochloride.

28. (Cancelled)

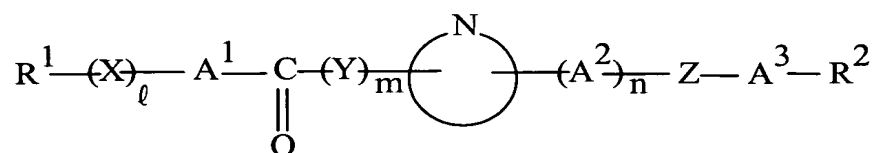
29. (Previously Presented) N-[(R)-1-{3-(4-piperidyl)propionyl}-3-piperidylcarbonyl]- β -alanine or its hydrochloride.

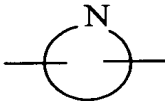
30. (Previously Presented) The process of claim 13 for preparing a compound of the formula:



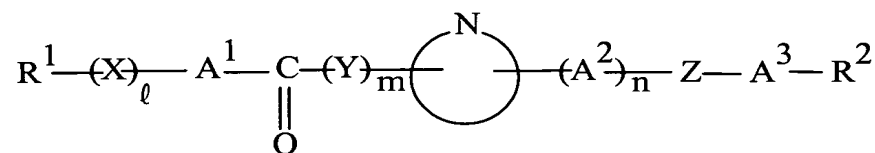
wherein R^1 , R^2 , A^1 , A^2 , A^3 , , X , Y , Z , ℓ , m and n are as defined in claim 13,
 wherein said process comprises the process defined in section (i) of claim 13.

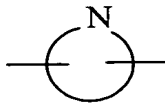
31. (Previously Presented) The process of claim 13 for preparing a compound of the formula:



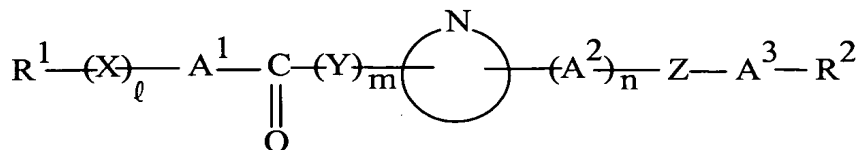
wherein R^1 , R^2 , A^1 , A^2 , A^3 , , X , Y , Z , ℓ , m and n are as defined in claim 13,
 wherein said process comprises the process defined in section (ii) of claim 13.

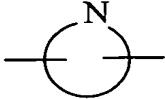
32. (Previously Presented) The process of claim 13 for preparing a compound of the formula:



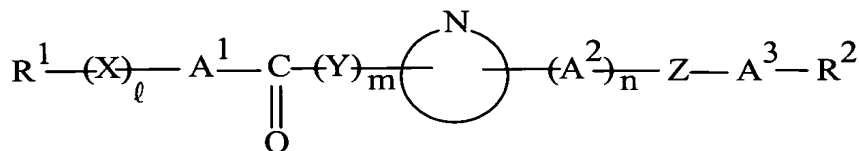
wherein R^1 , R^2 , A^1 , A^2 , A^3 , , X , Y , Z , ℓ , m and n are as defined in claim 13,
 wherein said process comprises the process defined in section (iii) of claim 13.

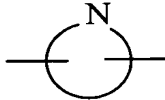
33. (Previously Presented) The process of claim 13 for preparing a compound of the formula:



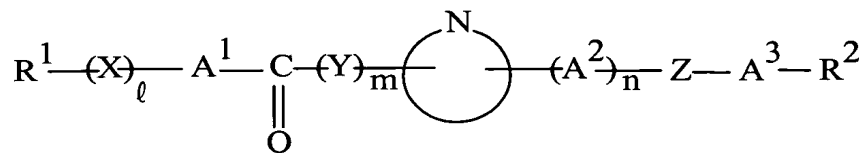
wherein $R^1, R^2, A^1, A^2, A^3,$ , X, Y, Z, ℓ, m and n are as defined in claim 13, wherein said process comprises the process defined in section (iv) of claim 13.

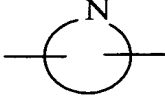
34. (Previously Presented) The process of claim 13 for preparing a compound of the formula:



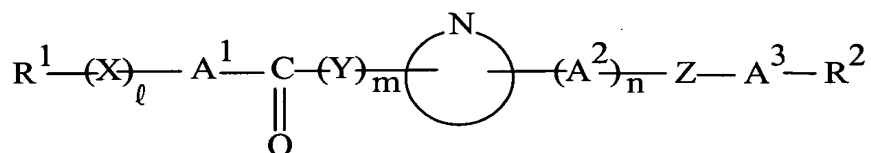
wherein $R^1, R^2, A^1, A^2, A^3,$ , X, Y, Z, ℓ, m and n are as defined in claim 13, wherein said process comprises the process defined in section (v) of claim 13.

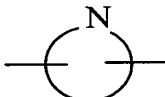
35. (Previously Presented) The process of claim 13 for preparing a compound of the formula:



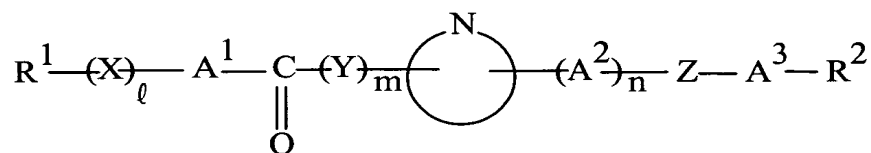
wherein R^1 , R^2 , A^1 , A^2 , A^3 , , X , Y , Z , ℓ , m and n are as defined in claim 13,
 wherein said process comprises the process defined in section (vi) of claim 13.

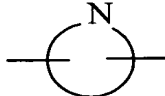
36. (Previously Presented) The process of claim 13 for preparing a compound of the formula:



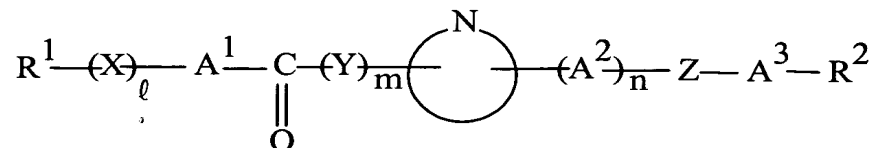
wherein R^1 , R^2 , A^1 , A^2 , A^3 , , X , Y , Z , ℓ , m and n are as defined in claim 13,
 wherein said process comprises the process defined in section (vii) of claim 13.

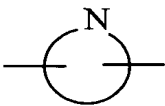
37. (Previously Presented) The process of claim 13 for preparing a compound of the formula:



wherein R^1 , R^2 , A^1 , A^2 , A^3 , , X , Y , Z , ℓ , m and n are as defined in claim 13,
 wherein said process comprises the process defined in section (viii) of claim 13.

38. (Previously Presented) The process of claim 13 for preparing a compound of the formula:



wherein R^1 , R^2 , A^1 , A^2 , A^3 , , X , Y , Z , ℓ , m and n are as defined in claim 13, wherein said process comprises the process defined in section (ix) of claim 13.

39. (Currently Amended) The A composition comprising the compound of Claim 1,
~~wherein said compound is isolated.~~

40. (Currently Amended) The A composition comprising a reaction mixture
containing the compound of Claim 1,
~~wherein said compound is purified.~~

41. (Currently Amended) The A composition comprising the compound of Claim 1
in combination with one or more pharmaceutically acceptable carriers or excipients,
~~wherein said compound is chemically synthesized.~~

42. (Currently Amended) The compound of Claim 1, wherein R^1 is selected from the group consisting of azetidiny, pyrrolidinyl, piperidyl, piperazinyl, morpholinyl, and quinolinyl.

43. (Currently Amended) The process of Claim 13, wherein R¹ is selected from the group consisting of azetidiny, pyrrolidiny, piperidyl, piperazinyl, morpholinyl, and quinolinyl.

44. (Currently Amended) The compound of Claim 18, wherein R¹ is selected from the group consisting of azetidiny, pyrrolidiny, piperidyl, piperazinyl, morpholinyl, and quinolinyl.

45. (Currently Amended) The A composition comprising the compound of Claim 18, ~~wherein said compound is isolated.~~

46. (Currently Amended) The A composition comprising a reaction mixture containing the compound of Claim 18, ~~wherein said compound is purified.~~

47. (Currently Amended) The A composition comprising an isolated or purified compound of Claim 18 in combination with one or more pharmaceutically acceptable carriers or excipients, ~~wherein said compound is chemically synthesized.~~